

Relationship Between Ovulation and Social Media Activity

Alyssa Parisette-Sparks

Angelo State University

### Abstract

The menstrual cycle has been shown to impact many facets of women's social behavior (Beall & Tracy, 2013; Saad & Stenstrom, 2012) and the recent enduring social media trend has provided a new arena to investigate this association. The purpose of this study was to determine if women's conception risk (high vs. low) will predict their selfie sharing activity via social media. Sixty females responded to online self-report questionnaires assessing the menstrual cycle and selfie sharing activity over the previous 5 weeks. Results revealed significant associations between high conception risk and increased selfie sharing in week 4. The implications of these findings will be further discussed.

### Relationship between Ovulation and Social Media Activity

The vast change in technology in the last 30 years has greatly impacted how individuals see, interact with, and interpret the world around them. This boom is highly visible with the introduction of social media. People are able to send and receive information to as many individuals as they want at the drop of a hat. One phenomenon in particular has an entire generation preoccupied. That phenomenon is the “selfie”. Recently added to the Merriam – Webster dictionary, it is defined as “an image of oneself taken by oneself using a digital camera especially for posting on social networks”. Because this trend is so new there has been limited research investigating it. Of the research conducted, Sorokowski et al. (2015) found that narcissism was associated with selfies posted by men but not women. In an effort to understand how personality type may reflect selfie styles, Qiu, Lu, Yang, Qu, and Zhu (2015) found that neuroticism was associated with the display of “duckface” selfies, and those taken in private locations were associated with low conscientiousness. As the literature grows on this subject, it can be expected that researchers will start to question what selfies accomplish for individuals from an evolutionary perspective. How does it help humans pass on their genetics and ensure survival?

A seemingly obvious perspective might suggest that people unconsciously utilize social media to increase their chances of attracting a mate. Considering most attraction begins with appearance, it would be easy to understand how sharing selfies would enhance a person’s quantity of prospective suitors. Roder, Brewer, and Fink (2009) found that women’s self-perceptions peaked in the days near ovulation, suggesting they would feel more confident about sharing pictures of themselves during the ovulatory phase of their cycle. Further, women who

were ovulating were found to be three times more likely to choose a red or pink colored shirt (Beall & Tracy, 2013) indicating they are attempting to invite additional attention to themselves.

When considering the above it would be appropriate to theorize, with current day trends, that women would be more apt to share pictures of themselves, and attract additional attention, when they are at peak risk of conception. The current study will assess women's peak risk of conception and the frequency with which they share selfies via social media, compared to the rest of their cycle.

## Method

### Participants

Sixty female undergraduate students ( $M = 20.02$  years,  $SD = 2.61$ ) from a mid-sized university in the Southwest were recruited. The sample consists of 58% Caucasians, 30% Hispanic, 7% African American, and 5% Asian. Participants volunteered to fulfill a course requirement or receive extra credit for a psychology course.

### Materials

**Descriptive Data.** A questionnaire requesting information about each participant's age, gender, ethnicity, and collegiate year was administered to participants.

**Ovulation.** The participants completed the 9-item modified Menstrual History Questionnaire (MHQ; University of Cincinnati, 2007). The MHQ is an inventory used to assess the menstrual cycle and subsequent ovulation. Participants responded to items such as "The date of my last period was:" and "How many days are there between periods?" with a free response answer structure. Ovulation date was then determined and coded for each week to separate groups: high risk for conception (Days 6-14) and low risk (Days 0-5 and 15-28).

**Selfies and Social Media Activity.** Participants completed the 20-item modified Facebook Intensity Scale (FBI; Ellison, Steinfield, & Lampe, 2007), to assess social media and selfie activity of participants. Using a Likert scale, participants selected the extent to which they agreed (5) or disagreed (1) with statements such as “Social Media is part of my everyday activity” or “I use Social Media to meet new people”. These questions were primarily used as distractors. Participants were given ten minutes to review their social media accounts to assess how many selfies they shared. For each of the previous five weeks, they answered the following question format: “In the last week I shared (enter number) "selfies" on social media”.

### **Procedure**

Participants were recruited through the SONA system. They were first shown a conditional statement asking they be female only, and not currently using hormonal birth control. A later question in the MHQ confirmed they were not using such methods. After consent was obtained, participants completed a demographic questionnaire, followed by the Menstrual History Questionnaire, then the Facebook Intensity Scale. Last, participants were fully debriefed and awarded one research credit. All questionnaires were completed online via PsychData.

### **Results**

A one-way between subjects ANOVA was conducted to compare the effects of high or low conception risk on self-reported selfie counts. There was a significant effect of conception risk on selfie counts within week 4,  $F(1, 58) = 7.79, p < .05$ . Weeks one, two, three, and five were not significant. Participants who were high on conception risk ( $M = 3.45, SD = 4.29$ ) reported more selfies than those low on conception risk ( $M = 1.20, SD = 1.79$ ). No other significant differences were found for weeks 1, 2, 3 and 5.

Extraneous positive correlations were found between the desire to use Social Media ( $M = 1.72$ ,  $SD = 0.74$ ) to investigate new people met socially and age ( $M = 20.02$ ,  $SD = 2.61$ ),  $r(60) = .35$ ,  $p < .01$ . Using a one-way between subjects ANOVA, this question also had a significant effect on ethnicity  $F(3, 56) = 2.88$ ,  $p < 0.05$ . One-way ANOVA also revealed ethnicity to have a significant effect on investigating others in the same class using Social Media  $F(3, 56) = 4.41$ ,  $p < .05$ . Post hoc comparisons using the Tukey HSD test indicated that the mean score for Caucasians ( $M = 1.89$ ,  $SD = 0.87$ ) was significantly different than Hispanics ( $M = 2.67$ ,  $SD = 1.08$ ). However, Asians ( $M = 3.33$ ,  $SD = 0.58$ ) and African Americans ( $M = 2.0$ ,  $SD = 0.82$ ) did not significantly differ from Caucasians and Hispanics in relation to this question. While these are superfluous associations, it is interesting to note that Hispanics are more likely than Caucasians to conduct follow-up examination of others using Social Media.

### Discussion

The purpose of this study was to examine if women who are at peak risk for conception are more likely to share selfies on Facebook. Through the evaluation of five weeks, one significant association was found to support this theory; females reported to share more selfies within week 4. Researchers have found various associations between ovulation and many social behaviors in women including increased cosmetics use (Guéguen, 2012), clothing color choice and purchases (Beall & Tracy, 2013; Saad & Stenstrom, 2012), food purchasing (Saad & Stenstrom, 2012), as well as increased sexual activity in single women (Caruso et al., 2014). Further, many studies have found that male perception changes during the ovulatory phase of women including increased ratings of attractiveness (Cobey, Buunk, Pollet, Klipping, & Roberts, 2013) and preference for photograph prototypes of fertile women's faces (Bobst & Lobmaier, 2012). Given the current technological atmosphere and the evidence of obvious social behavior

change in women during the ovulatory phase, significant associations with selfie sharing activity come as no surprise.

### **Limitations**

There were some limitations worthy of note in this study. The primary limitation was the small sample size. Time constraints led to a smaller sample size than what may have yielded significant results over all weeks. Even with the short time period provided, this study did provide some significant data to partially support the researchers' main hypothesis. Additional limitations included the self-reported selfie counts. Future studies should have researchers manually count social media selfies and code them accordingly based on type, i.e., individual, with one friend, or with multiple friends. Further, the operationalization of "social media" should be determined to decide which sources to include (e.g., Facebook, Instagram, Twitter, etc.) and whether the same picture across all counts for each, or just one.

### **Concluding Remarks**

To the best of our knowledge, no study has been completed to determine if risk of conception has an influence on the number of selfies shared by women. With further investigation and operationalization, there is a strong potential for there to be a significant association between women's risk for conception and selfie sharing activity across all weeks tested.

## References

- Beall, A. T., & Tracy, J. L. (2013). Women are more likely to wear red or pink at peak fertility. *Psychological Science, 24*(9), 1837-1841. doi:10.1177/0956797613476045
- Bobst, C., & Lobmaier, J. S. (2012). Men's preference for the ovulating female is triggered by subtle face shape differences. *Hormones and Behavior, 62*(4), 413-417. doi:10.1016/j.yhbeh.2012.07.008
- Caruso, S., Agnello, C., Malandrino, C., Lo Presti, L., Cicero, C., & Cianci, S. (2014). Do hormones influence women's sex? Sexual activity over the menstrual cycle. *Journal of Sexual Medicine, 11*(1), 211-221. doi:10.1111/jsm.12348
- Cobey, K. D., Buunk, A. P., Pollet, T. V., Klipping, C., & Roberts, S. C. (2013). Men perceive their female partners, and themselves, as more attractive around ovulation. *Biological Psychology, 94*(3), 513-516. doi:10.1016/j.biopsycho.2013.09.011
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students use of online social network sites. *Journal of Computer-Mediated Communication, 12*, 1143-1168.
- Guéguen, N. (2012). Makeup and menstrual cycle: Near ovulation, women use more cosmetics. *The Psychological Record, 62*(3), 541-548.
- Qiu, L., Lu, J., Yang, S., Qu, W., & Zhu, T. (2015). What does your selfie say about you? *Computers in Human Behavior, 52*, 443-449. doi:10.1016/j.chb.2015.06.032
- Röder, S., Brewer, G., & Fink, B. (2009). Menstrual cycle shifts in women's self-perception and motivation: A daily report method. *Personality and Individual Differences, 47*(6), 616-619. doi:10.1016/j.paid.2009.05.019

Saad, G., & Stenstrom, E. (2012). Calories, beauty, and ovulation: The effects of the menstrual cycle on food and appearance-related consumption. *Journal of Consumer Psychology*, 22(1), 102-113. doi:10.1016/j.jcps.2011.10.001

*Psychology*, 22(1), 102-113. doi:10.1016/j.jcps.2011.10.001

Sorokowski, P., Sorokowska, A., Oleszkiewicz, A., Frackowiak, T., Huk, A., & Pisanski, K.

(2015). Selfie posting behaviors are associated with narcissism among men. *Personality and Individual Differences*, 85, 123-127. doi:10.1016/j.paid.2015.05.004

University of Cincinnati (2007). *Menstrual History Questionnaire*. [Measurement instrument].

Retrieved from: <https://eh.uc.edu/assets/uploads/2015/02/2007-Menstrual-History-Questionnaire.pdf>